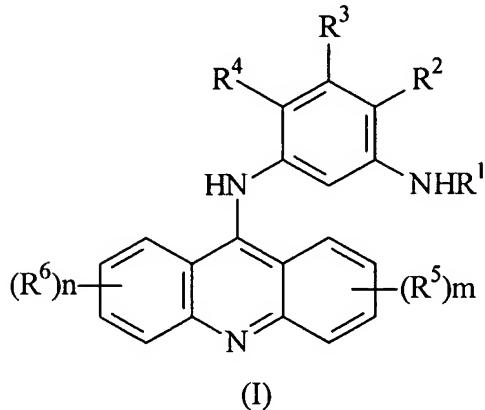


WHAT IS CLAIMED IS:

1 1. A compound of the following Formula (I)

2



3

4

5 wherein,

6 R¹ is hydrogen, COR^a, or COOR^a;

7 each of R², R³ and R⁴ is, independently, hydrogen, C₁-C₁₀ alkyl, or OR^b, with the proviso
8 that R², R³ and R⁴ cannot all be hydrogen;

9 each of R⁵ and R⁶ is, independently, hydrogen, C₁-C₆ alkyl, OR^c, nitro, halo, N(R^c)₂,

10 NH(CH₂)_pN(R^c)₂, (CH₂)_qOH, (CH₂)_qX, CONHR^c, CONH(CH₂)_pN(R^c)₂, SO₃R^c, or SO₂R^c

11 with the proviso that when R¹ is hydrogen and R⁴ is CH₃, R⁵ and R⁶ cannot both be
12 hydrogen; and

13 each of m and n, is independently, 0-4;

14 in which R^a is aryl, or C₁-C₁₀ alkyl, optionally substituted with oxo; R^b is C₁-C₁₀ alkyl; R^c
15 is hydrogen or C₁-C₁₀ alkyl; p is 1-5; and q is 1-3.

16

17 2. The compound of claim 1, wherein one of R², R³ and R⁴ is C₁-C₆ alkyl or OR^b and one of
18 R², R³ and R⁴ is hydrogen.

19

20 3. The compound of claim 2, wherein R¹ is hydrogen.

21

22 4. The compound of claim 2, wherein R¹ is COR^a or COOR^a.

23

24 5. The compound of claim 4, wherein R^a is C₁-C₄ alkyl, optionally substituted with oxo.

25

26 6. The compound of claim 2, wherein each of R⁵ and R⁶ is independently, hydrogen, C₁-C₆
27 alkyl, OR^c or CONHR^c, or CONH(CH₂)_pN(R^c)₂, and each of m and n is, independently, 1.

28

29 7. The compound of claim 6, wherein R^c is C₁-C₄ alkyl and p is 2.

30

31 8. The compound of claim 2, wherein one of R², R³ and R⁴ is C₁-C₄ alkyl or OR^b, R^b being
32 C₁-C₄ alkyl.

33

34 9. The compound of claim 8, wherein R¹ is COR^a or COOR^a, R^a being C₁-C₄ alkyl,
35 optionally substituted with oxo.

36

37 10. The compound of claim 8, wherein R¹ is H.

38

39 11. The compound of claim 8, wherein R⁵ and R⁶ are each independently hydrogen, C₁-C₆
40 alkyl, OR^c or CONHR^c, or CONH(CH₂)_pN(R^c)₂; and each of m and n is, independently,
41 1.

42

43 12. The compound of claim 11, wherein R^c is C₁-C₄ alkyl and p is 2.

44

45 13. The compound of claim 2, wherein one of R², R³ and R⁴ is CH₃ or OCH₃.

46

47 14. The compound of claim 13, wherein R¹ is COR^a or COOR^a.

48

49 15. The compound of claim 14, wherein R^a is C₁-C₄ alkyl, optionally substituted with oxo.

50

51 16. The compound of claim 15, wherein R¹ is COCH₂CH₂COCH₃ or COOCH₂CH₃.

52

53 17. The compound of claim 16, wherein R⁵ and R⁶ are each independently hydrogen, C₁-C₆
54 alkyl, OR^c, CONHR^c, or CONH(CH₂)_pN(R^c)₂; and each of m and n is, independently, 1.
55

56 18. The compound of claim 17, wherein R^c is C₁-C₄ alkyl and p is 2.
57

58 19. The compound of claim 18, wherein R⁵ is CONH(CH₂)₂N(CH₃)₂ and R⁶ is CH₃.
59

60 20. The compound of claim 19, wherein R⁵ and R⁶ are at the C-4 and C-5 positions of the
61 acridine ring, respectively.
62

63 21. The compound of claim 20, wherein the compound is {3-[4-(2-dimethylamino-
64 ethylcarbamoyl)-5-methyl-acridin-9-ylamino]-5-methyl-phenyl}-carbamic acid ethyl
65 ester, or {3-[4-(2-dimethylamino-ethylcarbamoyl)-5-methyl-acridin-9-ylamino]-4-
66 methyl-phenyl}-carbamic acid ethyl ester.
67

68 22. The compound of claim 13, wherein R¹ is hydrogen.
69

70 23. The compound of claim 22, wherein R⁵ and R⁶ are each independently hydrogen, C₁-C₆
71 alkyl, OR^c CONHR^c, or CONH(CH₂)_pN(R^c)₂, and each of m and n is, independently, 1.
72

73 24. The compound of claim 23, wherein R^c is C₁-C₄ alkyl and p is 2.
74

75 25. The compound of claim 24, wherein R⁵ is CONH(CH₂)₂N(CH₃)₂ and R⁶ is CH₃.
76

77 26. The compound of claim 25, wherein R⁵ and R⁶ are at the C-4 and C-5 positions of the
78 acridine ring, respectively.
79

80 27. The compound of claim 26, wherein the compound is [9-(1-amino-5-methyl-
81 phenyl)amino]-5-methyl-acridine-4-carboxylic acid (2-dimethylamino-ethyl)-amide or
82 [9-(5-amino-2-methyl-phenyl)amino]-5-methyl-acridine-4-carboxylic acid (2-

83 dimethylamino-ethyl)-amide.

84

85 28. A pharmaceutical composition comprising a compound of Formula (I) and a
86 pharmaceutically acceptable salt or carrier.

87

88 29. The composition of claim 28, wherein the compound is a compound of claim 7.

89

90 30. The composition of claim 28, wherein the compound is a compound of claim 13.

91

92 31. The composition of claim 28, wherein the compound is a compound of claim 21.

93

94 32. The composition of claim 28, wherein the compound is a compound of claim 27.

95

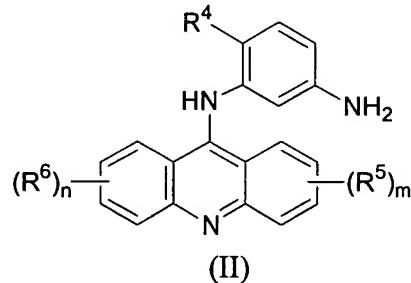
96 33. A method of treating cancer, comprising administering to a subject in need thereof an
97 effective amount of the compound of Formula (I).

98

99 34. The method of claim 33, wherein the cancer is colon cancer, stomach cancer, brain
100 cancer, breast cancer, or leukemia.

101

102 35. A method for synthesizing a compound of Formula (II):



103

104

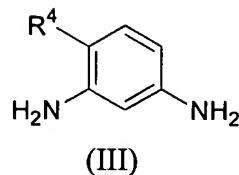
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106

107 the method comprising: contacting a compound of Formula (III):

108

109

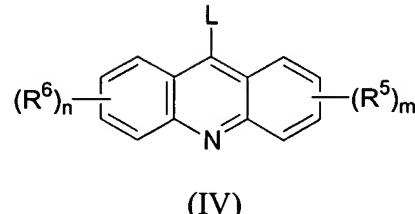


110

111

112 with a compound of Formula (IV):

113



114

115

116 to form a compound of Formula (IV), wherein:

117

118 R⁴ is C₁-C₁₀ alkyl or OR^b;

119 each of R⁵ and R⁶ is, independently, hydrogen, C₁-C₆ alkyl, OR^c, nitro, halo, N(R^c)₂,

120 NH(CH₂)_pN(R^c)₂, (CH₂)_qOH, (CH₂)_qX, CONHR^c, CONH(CH₂)_pN(R^c)₂, SO₃R^c, or SO₂R^c;

121 and

122 each of m and n, is independently, 0-4;

123 in which R^a is aryl, or C₁-C₁₀ alkyl, optionally substituted with oxo; R^b is C₁-C₁₀ alkyl; R^c is

124 hydrogen or C₁-C₁₀ alkyl; p is 1-5; q is 1-3;

125 L is halo, OSO₂R⁷, or OR⁷; and

126 R⁷ is alkyl, haloalkyl, or aryl optionally substituted with halo or nitro.

127